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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences/
Foundation in Law)

19 OCTOBER 2018
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet provided.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

Shah is a professional gamer who need to purchase a new computer for his work. Help him to make decision by answering the questions below:

- a. One of Shah's requirement for the new computer is a reliable processor for him to work with multiple programs simultaneously. Choose the suitable processor for his new computer and support your answer with **TWO (2)** reasons. (2.5 marks)
- b. State **TWO (2)** characteristics of gaming keyboard which able to increase Shah's competency in his work. (2 marks)
- c. Shah are considering to purchase a force-feedback game controller to support his gaming activities. Explain briefly the function of force feedback feature and its benefit. (2 marks)
- d. Shah decided to purchase and installed Windows 10 as the operating system for his new computer. Classify and explain briefly the type and category of this operating system. Give other example of operating system as option for Shah to choose for his computer. (3.5 marks)

QUESTION 2 [10 Marks]

Lydia has decided to develop a payment terminal system for her grocery shop. She plans to have 2 payment terminals which allows payment to be made by cash or card either credit or debit.

- a. The terminal will also provide a contactless payment method for the customer. Identify the protocol used for this method and explain briefly how it works. (1.5 marks)
- b. These terminals required to have an Internet access to complete the transaction. Suggest and explain briefly to her the **BEST** dedicated line for the Internet access. Give **ONE (1)** example of product in Malaysia that offered this access. (1.5 marks)
- c. Convince Lydia to upgrade the existing system in her grocery shop to database approach by giving her briefly **THREE (3)** advantages of it. (3 marks)

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d. All the planning, analysis and design activities for the new system is done. As a leader of the development team, explain briefly to your team members **FOUR (4)** major activities need to be performed in the next phase of this system development. (2 marks)

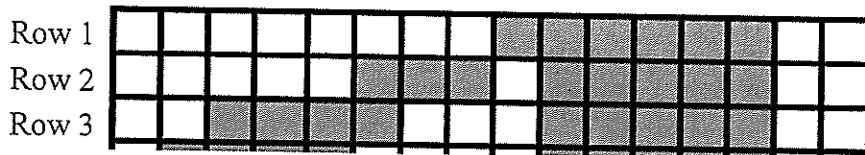
e. Lydia is still uncertain on the decision to deploy the new system using parallel conversion. Help her to make decision by giving **TWO (2)** benefits of using this conversion strategy. (2 marks)

QUESTION 3 [10 Marks]

Sinar Harapan Sdn. Bhd. are specialized in designing multimedia application and products for companies and individuals. They plan to expand their businesses by having services to handle digital security and privacy issues.

a. You are the graphic designer and assigned to create a simple logo for a company based on their corporate colours which is blue and red. You have decided to save it in GIF (Graphic Interchange Format). Answer the questions below based on this scenario.

- State and explain briefly the compression method used by this format. (1.5 marks)
- Write the compression for row 2 and 3 for the picture below based on the above compression method. (2 marks)



- Recommend and explain briefly **ONE (1)** multimedia application or product that can be developed by Sinar Harapan Sdn. Bhd. (1.5 marks)
- One of the issues in handling digital security is involve a deliberate act that is against the law especially cybercrime. Explain briefly the categories of perpetrators in cybercrime as listed below. (3 marks)
 - Hacker
 - Cracker
 - Script kiddies
- As computer's user, it is quite impossible for us to ensure that virus and malware will never attack our computer. Discuss **FOUR (4)** practices that can be applied to protect our computer. (2 marks)

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QUESTION 4 [10 Marks]

- a. You are preparing for a meeting in your company's conference room and have connected your laptop to the projector. When the projector displays the information from your laptop screen, the resolution drops significantly and not everything fits on the screen. In your opinion, what is this problem related to and what action can you take to correct this problem? (2 marks)
- b. As with many other input and output devices, one factor that determine the quality of an ink-jet printer is its resolution. Explain how does printer resolution being measured and how does resolution affect print quality of an ink-jet printer? (4 marks)
- c. You are asked to set up a network for your student office with 8 computers where all the computer will share equal responsibilities and capabilities. Suggest a type of network architecture and discuss **TWO (2)** characteristics of the network architecture you recommended. (2.5 marks)
- d. Based on question 4(c) above, identify **THREE (3)** benefits of having network connection in the office. (1.5 marks)

QUESTION 5 [10 marks]

- a. Agnes wanted to create a clinic computer based medical record system using Microsoft Access for her final year project. The system will facilitate the clerks and doctors to access and manage information in short time. One of the entity or object in her database system is about patient information. Suggest to Agnes **FOUR (4)** relevant field names with their data types about patient records. (2 marks)
- b. In a system development life cycle (SDLC), a system analyst will study about the feasibility assessment of the project assigned. Typically, system analyst uses at least four tests to evaluate feasibility of a project. Compare any **TWO** of the tests. (2 marks)
- c. At present, movies and video games uses virtual reality to enhance the reality of the content. Identify **THREE (3)** advantages of virtual reality. (3 marks)
- d. Users are advised to back up their computer and mobile devices files regularly to protect against data loss or information theft. There are various backup methods available for user to deploy. Explain briefly the different between full backup, differential backup and selective backup. (3 marks)